The life history of prostate adenocarcinoma

Introduction
Prostate adenocarcinoma is the most prevalent cancer for men in Australia (excluding skin cancers). Hence, early detection and diagnosis are essential for effective treatment with serology and the aid of the latest immunohistochemistry (IHC) stain NKX3.1, in conjunction with classic PSMA and AMACR+ 34βE12 +p63 cocktail.

Patient

Symptoms
- Unusual urinary problems (pain, frequency, blood)
- Unexplained weight loss

Doctors
- GPs, urologists or oncologists

Investigations

Blood test (high PSA levels)
Direct rectal examination (may be firm)
MRI (PIRAD score 4 or 5)

Biopsy (Adenocarcinoma) ISUP/WHO Grade group & Gleason Score:
- Group 1 = Score < 6 (low)
- Group 2 = Score 3+4=7 (intermediate)
- Group 3 = Score 4+3=7 (intermediate)
- Group 4 = Score 4+4=8 (high)
- Group 5 = Score 9 & 10 (aggressive)

Diagnosis confirmed by IHC stain

Androgen deprivation therapy (hormone therapy)
Chemotherapy
External beam radiotherapy
Brachytherapy
Surgery
- Radical prostatectomy (early prostate cancer)
- Removal of lymph nodes (aggressive)

Treatments

Conclusion
Detection and diagnosis of prostate carcinoma is a multidiscipline teamwork and IHC stain plays one of the crucial roles. NKX3.1 and PSMA are specific for confirming prostate primary, and AMACR, 34βE12 and p63 are useful diagnostic markers.

References

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